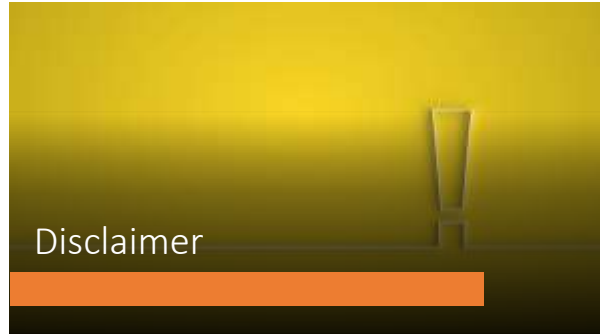




# Gingival Conditions in Young patients: The What, the why and the “now what”?

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- Gingivitis-Dental Biofilm induced
  - Dental biofilm alone
  - Mediated by systemic or local RF
  - Local RF/ predisposing factors
  - Drug-influenced Gingival Enlargement

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- Gingival Diseases-non Dental Biofilm Induced
  - Genetic
  - Specific infections
  - Inflammatory/ immune conditions
  - Granulomatous inflammatory lesions
  - Epulides
  - Neoplasms
  - Endocrine, nutritional & metabolic diseases
  - Traumatic Lesions
  - Gingival pigmentation

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## Mucogingival Deformities and Conditions around teeth

1. Gingival phenotype
2. Gingival/soft tissue recession
3. Lack of gingiva.
4. Decreased vestibular depth
5. Aberrant frenum/muscle position
6. Gingival excess
7. Abnormal color
8. Condition of the exposed root surface

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## Mucogingival Deformities and Conditions around teeth

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## Focus

- Mucogingival conditions
- Localized juvenile spongiotic gingival hyperplasia
- Gingival Enlargement

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## Mucogingival Conditions with Gingival recession

- Interdental CAL
- Gingival phenotype
- Root surface conditions (NCCL or caries)
- Detection of the CEJ
- Tooth position
- Aberrant frenum
- # of adjacent recessions.

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## Mucogingival Conditions without Gingival recession

- Tooth position
- Aberrant frenum
- Vestibular depth.

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## Recession on children/ Adolescent

- Definition:
  - Displacement of gingival margin apical to the Cemento-enamel Junction (AAP Glossary of terms)

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### What Causes Gingival Recession? (Cortelini & Bissada 2018)

- Tooth malposition
  - rotated, tilted, facially displaced teeth
- Faulty tooth-brushing technique
- Gingival inflammation
- Abnormal frenum attachment
- Iatrogenic dentistry
- Occlusal trauma???
- Tongue or lip piercing
  - Several case reports
- Periodontal Phenotype
- Orthodontics??



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### Ortho Tx & Recession?

- Joss-Vassalli I et al Orthod Craniofac Res 2010 Systematic Review
  - "Movement of the incisors out of the osseous envelope of the alveolar process may be associated w/ a higher tendency for developing gingival recession" (level of evidence: low)
  - Amount of recession bw proclined and non-proclined tth SSD but NOT clinical significant)
- Kim D & Neiva R (J Perio 2015;86 suppl: s56-s72) SR
  - Limited evidence but if <2mm of KT consider GA
- Jepsen et al (J Perio 2018)
  - **Incisor proclination** leads to 5-12% of GR. Long term up to 47%.

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2 weeks

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### Initial Presentation



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Incisions



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Graft Placement



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1 Week Post-op



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4 Week Post-op



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1 Year Post-op



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Pre-op #11



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Pre-op and ADM being sized



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Coronally Positioned Tunnel



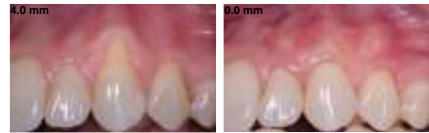
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Post-op Healing



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Pre- and Post-treatment #11



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Pre- and Post-treatment Max Anterior



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## Localized juvenile spongiotic gingival hyperplasia (Darling et al 2007, Decani et al 2021)

- localized patches of vivid red, slightly thickened, painless, and persistent lesions of the attached gingiva that generally involve the marginal gingiva of anterior teeth

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## Epidemiology

- F:M 2.3:1
- Whites > Hispanic > Asians
- Chang et al 55% 11-15 yo
- Recurrence rate 25%

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## Etiology/ Pathogenesis

- Plaque??
- Hormonal modifications ??
- Mouth breathing??
- ???

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## Management

- Topical Steroids
- Surgical intervention
- Complications:
  - Esthetic concerns
  - Recurrence
  - Definitive tx (?)

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SM UMKC



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## Gingival Enlargement

- Hereditary Gingival Fibromatosis
- Systemic Causes of Gingival Enlargement
- Medication Induced Gingival Enlargement
- Inflammatory Gingival Enlargement

AAOM

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## Hereditary Gingival Fibromatosis (Alminana-Pastor et al 2017)

This is a rare hereditary condition that usually develops during childhood, although some cases may not become evident until adulthood. The condition presents as a slow growing generalized or occasionally localized non-tender, firm, pale pink enlargement of the gingiva. It is characterized by a **benign, non-hemorrhagic, fibrous gingival overgrowth** that can appear in isolation or as part of a syndrome. Clinically, a pink gingiva with marked stippling can be seen to cover almost all the tooth, in many cases preventing eruption. HGF usually begins during the transition from **primary to permanent teeth**, giving rise to a condition that can have negative psychological effects at that age.

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## Epidemiology (Alminana-Pastor et al 2017)

- Low prevalence (1/175,000)
- Autosomal Dominant inheritance pattern
- 20% no familiar hx

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## Etiology/Pathogenesis

(Alminana-Pastor et al 2017)

- Etiology: unknown
- more sub-epithelial fibroblast proliferation and greater collagen and fibronectin synthesis and, a reduction in the matrix metalloproteinases (MMPs) entrusted with collagen degradation
- Most of the time: w/ the eruption of the permanent teeth

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## Complications



ISSUES WITH LIP CLOSURE



FUNCTIONAL DIFFICULTY  
(MASTICATION, SPEECH, OCCLUSAL CONTACT)



PSYCHOLOGICAL BURDEN

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## Management



Referral / Gingivectomy  
Phase I vs phase II



(Plaque control)

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Pastor 2017

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## Systemic Causes of Gingival Enlargement (Beaumont et al 2017)

- There are numerous physiologic and systemic conditions that may promote localized and/or generalized gingival enlargement such as pregnancy, hormonal imbalances, and leukemia.

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## Classification based on etiology

Systemic factors	Progression
Leukemia	Localized
Neoplasia	Generalized
Drug/allergic/immune response	Non-infective/infected Localized/generalized Colossal
Endocrine	
Systemic	Localized/generalized
Reproductive	Localized/generalized Generalized
Immunodeficiency	Localized/generalized Tooth   Dispro
Diagnosis/treatment	
Medicine	Healthy gingival/treatment Health/Prophylaxis
Surgery	Deep   After-growth

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## Complications



DISFIGUREMENT



FUNCTIONAL DIFFICULTY  
(MASTICATION, SPEECH, OCCLUSAL CONTACT)



PLAQUE ACCUMULATION



TOOTH MIGRATION



DELAYED ERUPTION OF PERMANENT TEETH

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## Management



Plaque control



DD?



Referral /Biopsy/  
Gingivectomy



PR

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## Drug induced Gingival enlargement

- Anticonvulsants (Phenytoin)
- Immunosuppressants (cyclosporin, tacrolimus)
- Calcium Channel Blockers (nifedipine)
- combos

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## Epidemiology (Doufexi et al J perio 2005)

- children and adolescence, location anterior gingival tissues
- Age and plaque predisposing factors
- Phenytoin 50%, cyclosporin 30%, nifedipine 20%
- Cyclosporin + Ca CB : males >females (?)
- Dose dependent?? Not really
- Degree of GO: drug concentration at GCF, bioavailability & degree of protein binding

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## Etiology/Pathogenesis

- Poor oral Hygiene/ plaque
  - Status of perio health prior to drug therapy is related to development of GO
- Duration of transplantation and the severity of GO was negatively correlated

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## Complications



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Lasergel Angel

63

## Management



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Waterlase Angel

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## Inflammatory Gingival Enlargement (Beaumont et al 2017)

- The gingival enlargement observed may be localized or generalized and is an inflammatory response that occurs when plaque (collection of food debris and bacteria) accumulates on the teeth. This is a result of the patient not accomplishing effective oral hygiene.
- Most common type of GE

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## Classification based on etiology

Classification	Etiology	Management
Local factors	Plaque, calculus, ill-fitting dentures, orthodontic appliances, restorations	Oral hygiene, scaling, root planing, adjustment of dentures
Systemic factors	Diabetes mellitus, pregnancy, hormonal changes, certain medications (phenytoin, cyclosporine, calcium channel blockers)	Control of underlying condition, medication adjustment, referral to specialist
Idiopathic	Unknown	Observation, referral to specialist

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## Complications



DISFIGUREMENT



FUNCTIONAL DIFFICULTY  
(MASTICATION, SPEECH,  
OCCLUSAL CONTACT)



PLAQUE ACCUMULATION



TOOTH MIGRATION

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## Management



Plaque control



Non SX TX



Referral /  
Gingivectomy(?)

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AA

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PR

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PR

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## Epidemiology (Vincent-Bugnas et al 2021)

- Around 49%

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## Etiology/Pathogenesis

- Poor oral Hygiene/ plaque
- Conventional metal brackets
- Mouth breathing
- Male gender !
- Thick perio phenotype
- Elastomeric ligations
- Duration of treatment

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## Etiology/Pathogenesis

- Poor oral Hygiene/ plaque
- **Conventional metal brackets**
- Mouth breathing
- Male gender
- Thick perio phenotype
- Elastomeric ligations
- **Duration of treatment**

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## Complications



DISFIGUREMENT



FUNCTIONAL DIFFICULTY  
(MASTICATION, SPEECH, OCCLUSAL CONTACT)



PLAQUE ACCUMULATION

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## Management



Plaque control



Non Sx Tx



Referral /  
Gingivectomy



PR

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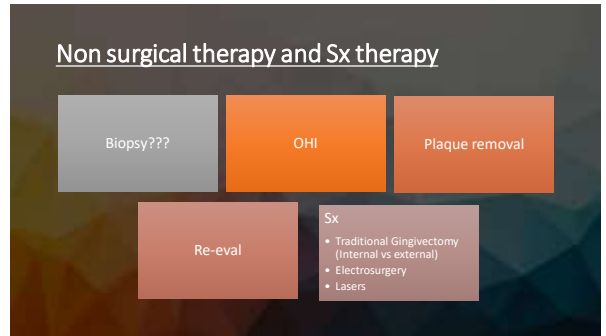


Dr Khal Rasheed

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Now what???

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Traditional



Cohen's Atlas

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Traditional



Cohen's Atlas

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Electrosurgery

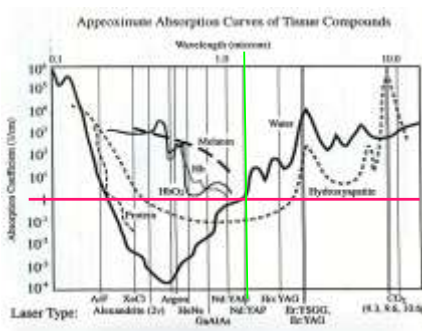


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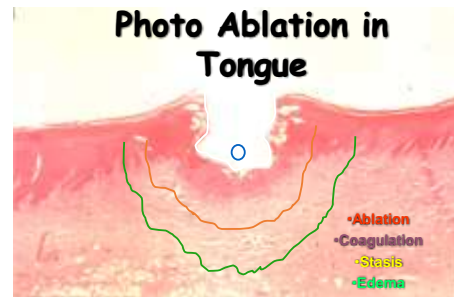
Laser



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Take home message

-   
EVALUATION / EVALUATION / EVALUATION (MEDICAL & DENTAL)
-   
ASSESS DIAGNOSIS
-   
ASSESS ETIOLOGY
-   
LOOK INTO THE PROGNOSIS (TOOTH OVERALL)
-   
FORMULATE TO PLAN(S)
-   
ASK FOR HELP!

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